

# EXHIBIT #3

STAN GIBILISCO  
THE  
ILLUSTRATED  
DICTIONARY  
OF  
**Electronics**  
EIGHTH EDITION  
Audio/Video  
Consumer Electronics  
Wireless Technology

# **The Illustrated Dictionary of Electronics**

Eighth Edition

*Stan Gibilisco*  
*Editor-in-Chief*

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| NBS SWG | Millimeters | Inches |
|---------|-------------|--------|
| 33      | 0.254       | 0.0100 |
| 34      | 0.234       | 0.0092 |
| 35      | 0.213       | 0.0084 |
| 36      | 0.193       | 0.0076 |
| 37      | 0.173       | 0.0068 |
| 38      | 0.152       | 0.0060 |
| 39      | 0.132       | 0.0052 |
| 40      | 0.122       | 0.0048 |

**British thermal unit** Abbreviation, Btu. The amount of heat required to raise the temperature of a pound of water by one degree Fahrenheit, in an ambient environment of slightly greater than 39°F.

**broadband** Also called *wideband*. Possessing a characteristic wide bandwidth or range of operating frequencies. This term can be applied at audio frequencies (AF) or radio frequencies (RF), and is frequently used to describe the performance of oscillators, amplifiers, antennas, and various types of networks. The term can also be applied to describe the nature of electromagnetic emissions or noise. Examples are given in the following several definitions. Compare NARROWBAND.

**broadband amplifier** An amplifier that has very wide frequency response, such as 10 Hz to 10 MHz. Examples are an instrument amplifier and a video amplifier.

**broadband antenna** An antenna that operates satisfactorily over a comparatively wide band of fre-

quencies without requiring retuning at individual frequencies. Examples are the log-periodic and disccone antennas.

**broadband electrical noise** Electrical noise that is present over a wide frequency spectrum (e.g., 3 kHz to 30 MHz).

**broadband I-F** An intermediate-frequency (IF) amplifier or amplifier chain. The wide frequency response is important when an increased bandpass is preferred to high selectivity, as in high-fidelity radio tuners.

**broadband interference** Interference, other than noise, that is present over a wide band of frequencies. An example is over-the-horizon short-wave radar, recognizable by its characteristic "woodpecker" sound in communications receivers at high frequencies.

**broadband Klystron** A Klystron oscillator with a broadband tuned circuit.

**broadband tuning** Receiver tuning characterized by a selectivity curve having a pronounced flat top or broad nose that passes a wide band of frequencies. Also called *broadband response*.

**broadcast 1.** A radio-frequency transmission of an intelligence-bearing signal that is directed to numerous unspecified receiving stations. **2.** The transmission or dissemination of signals to a large, unspecified number of receiving stations.

**broadcast band** Any band of frequencies allocated for broadcasting (see BROADCAST SERVICE, 1), but particularly the U.S. standard amplitude-modulation (AM) and frequency-modulation (FM) radio broadcast bands at 535 to 1605 kHz (AM) and 88 to 108 MHz (FM).

**broadcasting** The dissemination of signals for reception by the general public, not for communications purposes.

**broadcast interference** Abbreviation, BCI. Interference to normal reception by broadcast receivers, usually arising from signals emitted by other stations.

**broadcast receiver** A receiver intended primarily to pick up standard broadcast stations. Also see BROADCAST BAND.

**broadcast service 1.** Any radio transmitting service (including television) that exists for the purpose of sending out electromagnetic signals for general reception, rather than addressing them to specific receiving stations. **2.** The service provided by a station operating in the broadcast band.

**broadcast station** Any station in the broadcast service, but especially one assigned to operate in the standard U.S. broadcast bands. Also called *broadcasting station*.

**broadcast transmitter** A radio transmitter designed specifically for, and operated in, the broadcast service.

**broad response** Slow deflection of an indicator, such as a meter, over a relatively wide range of values of the input quantity.

